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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/762,652	04/27/2001	Andrew Dodd	6114	8516

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12/10/2004

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EXAMINER

ROSE, ROBERT A

ART UNIT

PAPER NUMBER

3723

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/762,652

Applicant(s)

DODD ET AL.

Examiner

Robert Rose

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17,19-21 and 23-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17,19-21 and 23-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-16, 18, and 22 have been canceled.

2. Claims 17, 19-21, and 23-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 17, line 7 the term "Ar" is undefined in the claim. In claim 17, line 14 the use of a period in the body of the claim is improper. Claim 19 is currently dependent from canceled claim 18. In claim 27, line 2 it is unclear from the claim whether the recited expression "is improved from around 0.13 m to around 0.07 m" is intended to recite a range of improvement for the final product after treatment, or whether the "0.13 m" is intended to refer to the surface roughness prior to any treatment. Further, in claim 27 it remains unclear what parameter is being measured. In claim 29, line 2 it appears the word "hearing" should be changed to -bearing-. In claim 29, line 7 in the expression "to increase the compressive stress in the surface of the component by between 200Mpa and 500Mpa" it is unclear from the claim whether this is a range of improvement(ie a difference in the value of stress between untreated and treated workpiece), or a range of final measurements taken of the stress.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 17, 19, and 23-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Hashimoto or Wood. Both Hashimoto and Wood(British No. 227277) disclose a method of producing a surface finish on bearing surfaces within the recited range by immersion grinding. Processing time is dependent upon the particular workpiece but is given in Hashimoto as 45 minutes for one example(column 6, lines 30-34). The compressive strength increase would have been an expected result of performing the method of either Hashimoto or Wood. The desired range of compressive strength imparted to the bearing surface would have been an obvious matter of design choice depending upon the conditions under which the bearing is to be used.
5. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Hashimoto or Wood, and further in view of Ohno. Ohno disclose a conventional apparatus for finishing workpieces comprising a rotary abrasive media receptacle and a rotary holder for preventing workpieces from contacting each other during immersion machining. To finish the bearing surfaces in a conventional rotary immersion receptacle with rotation of the workpieces within the media, to prevent contact between workpieces would have been obvious in view of Ohno.
6. Applicant's arguments filed August 26, 2004 have been fully considered but they are not persuasive. Applicant has indicated in his remarks that it is not the surface roughness achieved, but rather the time period of exposure which results confers the particular range of compressive stress to the work surface. However, Applicant's limitation of "the hard particle abrasion being performed for between 10 minutes and 1 hour" is deemed to be disclosed in the art of record(Note Hashimoto column 6, lines 30-34). Further, with regard to the final product, applicant's recitation of the compressive stress and fatigue life are results rather than limitations

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of the method steps, and must therefore follow as a result of performing the steps recited. If a result other than this is attainable by performing these method steps, then the steps have not set forth distinctly the subject matter which applicant regards as his invention. The desired compressive stress range and fatigue life are regarded as obvious matters of design choice depending upon the particular application intended for the final product.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication should be directed to Robert Rose at telephone number (703) 308-1360.

rr

December 8, 2004.



ROBERT A. ROSE
PRIMARY EXAMINER
ART UNIT 323